

Appl. No. 09/787,244
Amd dated August 20, 2004
Reply to Office Action of May 20, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Canceled).

Claim 2 (Currently Amended): The method of claim 19 wherein ~~said~~ the first electrode comprises a self-sizing cuff electrode.

Claim 3 (Currently Amended): The method of claim 19 wherein ~~said~~ the second electrode comprises a self-sizing cuff electrode.

Claim 4 (Currently Amended): The method of claim 19 wherein ~~said~~ the second electrode comprises a surface electrode.

Claim 5 (Currently Amended): The method of claim 19 wherein ~~said~~ the first stimulus pulses ~~transmitted to said first electrode~~ comprise a quasitrapezoidal pulse train at 20 Hz.

Claim 6 (Currently Amended): The method of claim 19 wherein ~~said~~ the first stimulus pulses ~~transmitted to said first electrode~~ comprise a conventional rectangular pulse train at 20 Hz.

Claim 7 (Currently Amended): The method of claim 19 wherein ~~said~~ the second stimulus pulses ~~transmitted to said second electrode~~ comprise an intermittent pulse train at 20Hz having a one second on/1 second off pattern.

Claim 8 (Currently Amended): The method of claim 19 wherein ~~said~~ the first and second electrodes are applied to the dorsal and ventral roots of the S3 sacral nerve.

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Claim 9 (Currently Amended): The method of claim 19 ~~where in said~~ wherein the second stimulus pulses transmitted to said second electrode have a nominal amplitude of less than 1 ~~ma~~ mA and a pulse duration of 10 to 100 μ sec.

Claim 10 (Currently Amended): The method of claim 19 wherein ~~said the~~ the stimulus pulses transmitted to said first electrode have a nominal amplitude of 1 ~~ma~~ mA and a pulse duration of 350 to 500 μ sec.

Claim 11 (Currently Amended) An apparatus ~~for the control of bladder function in a patient by combined stimulation of ventral and dorsal sacral roots, said apparatus~~ comprising:

a first electrode, adapted to be coupled to a sacral ventral sacral root of a patient and further adapted to deliver a first series of stimulus pulses to the sacral ventral root;

a second electrode, adapted to be coupled to a sacral dorsal sacral root corresponding to said the sacral ventral sacral root and further adapted to deliver a first series of stimulus pulses to the sacral dorsal root; and [[.]]

and control means electrically coupled to said the first and second electrodes, for generating a the first and second series of stimulus pulses simultaneously to said first and second electrodes sufficient to cause the bladder of said patient to contract, whereby emptying said bladder,

wherein the first electrode is not adapted to deliver the first series of stimulus pulses to the sacral dorsal root, and

wherein the second electrode is not adapted to deliver the second series of stimulus pulses to the sacral ventral root.

Claim 12 (Currently Amended): The apparatus of claim 11, wherein ~~said the~~ the first electrode comprises a self-sizing cuff electrode.

Claim 13 (Currently Amended): The apparatus of claim 11, wherein ~~said the~~ the second electrode comprises a self-sizing cuff electrode.

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Claim 14 (Currently Amended): The apparatus of claim 11, wherein ~~said~~ the second electrode comprises a surface mounted electrode.

Claim 15 (Currently Amended): The apparatus of claim 11, wherein ~~said~~ the first stimulus pulses ~~generated to said first electrode by said control means~~ comprises a quasitrapezoidal pulse train at 20 Hz.

Claim 16 (Currently Amended): The apparatus of claim 11, wherein ~~said~~ the second stimulus pulses ~~generated to said second electrode by said control means~~ comprises an intermittent pulse train pattern of 1 second off/1 second on.

Claim 17 (Currently Amended): The apparatus of claim 11, wherein ~~said~~ the first stimulus pulses ~~generated to said first electrode by said control means~~ have a nominal amplitude of 1 ~~ma~~ mA and a pulse duration of 350 to 500 μ sec.

Claim 18 (Currently Amended): The apparatus of claim 11, wherein the second stimulus pulses ~~generated to said second electrode by said control means~~ have a nominal amplitude of 1 ~~ma~~ mA and a pulse duration of 10 to 100 μ sec.

Claim 19 (New): A method comprising :

transmitting a first series of stimulus pulses to a sacral ventral root of a patient with a first electrode; and

simultaneously transmitting a second series of stimulus pulses to a sacral dorsal root corresponding to the sacral ventral root of the patient with a second electrode,

wherein transmitting the first series of stimulus pulses to the sacral ventral root comprises not transmitting the first series of stimulus pulses to the sacral dorsal root, and

wherein transmitting the second series of stimulus pulses to the sacral dorsal root comprises not transmitting the second series of stimulus pulses to the sacral ventral root.